MAR 15 2018

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Bruce Berwager
Vice President of Operations
Beta Operating Company, LLC
111 West Ocean Blvd., Suite 1240
Long Beach, CA 90802

Dear Mr. Berwager:

Subject: Proposed Administrative Order on Consent for Platforms Elly and Ellen, Facility No. CAF001148 and Facility No. CAF001147, NPDES General Permit CAG280000

Representatives of the Enforcement Division of the Environmental Protection Agency, Region IX, ("EPA") conducted a Clean Water Act Compliance Inspection of Platforms Elly and Ellen, operated by Beta Operating Company, LLC dba Beta Offshore ("Beta"), associated with National Pollutant Discharge Elimination System General Permit CAG280000 on March 8 and 9, 2017. During the inspection, we observed several areas of concern, including:

- Samples for oil and grease and zinc were not collected and analyzed in accordance with approved EPA methodologies;
- Data submitted to EPA in discharge monitoring reports (DMRs) did not reflect all analyzed samples as required by the General Permit;
- Protocols for sampling and analyzing produced water, Discharge 002, do not appear to yield data representative of the effluent; and
- Poor effluent monitoring practices, such as sample bottles without labels and incomplete chain of custody forms.

EPA communicated these observations in the Inspection Report mailed to Beta on May 23, 2017. Beta provided responses on June 16, 2017 and July 14, 2017. These responses indicate that Beta appears to have made improvements in many areas to address the concerns previously identified. However, additional improvements appear necessary to fully return the facilities to compliance with the CWA and General Permit.

EPA is interested in ensuring that Beta fully returns to compliance and we are willing to work with you to ensure you achieve timely and consistent compliance. In order to facilitate return to consistent compliance, we have enclosed a draft Administrative Order on Consent ("AOC"). The proposed AOC sets forth a process to ensure the Facility can maintain consistent compliance

with its permit and the Clean Water Act. We would like to set up a meeting with you to discuss the proposed AOC. Our expectation is that this meeting will allow us to quickly reach agreement on the terms and conditions of the proposed AOC.

Please contact Colby Tucker at (415) 972-3556 or by email at Tucker.WilliamC@epa.gov within two weeks of receipt of this letter to schedule the meeting. You may also have your legal counsel contact Desean Garnett in our Office of Regional Counsel at (415) 972-3905 or by email at Garnett.Desean@epa.gov.

We appreciate your cooperation and prompt attention to this matter.

Sincerely,

Kathleen H. Johnson
Director
Enforcement Division

Enclosure: Draft AOC
cc (w/ enclosure via email):
James Salmons, Bureau of Safety and Environmental Enforcement, Pacific OCS Region

ENFORCEMENT CONFIDENTIAL
FOR SETTLEMENT PURPOSES ONLY

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, California 94105

IN THE MATTER OF:	)	DOCKET NO. CWA-309-2018-000X
Beta Operating Company, LLC dba Beta Offshore Long Beach, California	)	**ADMINISTRATIVE ORDER ON CONSENT**
Respondent.	)	*Proceeding under Section 309(a) of the Clean Water Act, 33 U.S.C. § 1319(a)*

ADMINISTRATIVE ORDER ON CONSENT

I. STATUTORY AUTHORITY

1. Section 309(a) of the Clean Water Act (CWA), 33 U.S.C. § 1319(a), provides that, whenever the U.S. Environmental Protection Agency (EPA) finds that any person is in violation of any condition or limitation which implements, *inter alia*, Sections 301(a) and 402 of the CWA, 33 U.S.C. §§ 1311(a) and 1342, the EPA may issue an order requiring such person to comply with such condition or limitation, and shall specify a time for compliance that the EPA determines to be reasonable.

2. The following Findings of Fact and Determinations of Law are made and this Administrative Order on Consent (AOC) is issued pursuant to the authority vested in the EPA by Section 309(a) of the CWA, 33 U.S.C. § 1319(a), as amended. This authority has been delegated to the Regional Administrator of the EPA, Region IX, and further delegated by the Regional Administrator to the Director of the Enforcement Division of the EPA, Region IX.

II. STATUTORY AND REGULATORY FRAMEWORK

3. CWA Section 301(a), 33 U.S.C. § 1311(a), makes it unlawful for a person to discharge pollutants from a point source into waters of the United States, except as authorized by a National Pollutant Discharge Elimination System (NPDES) permit issued pursuant to CWA Section 402, 33 U.S.C. § 1342.

4. CWA Section 402, 33 U.S.C. § 1342, establishes the NPDES program and authorizes the EPA and authorized states to issue permits governing the discharge of pollutants from point sources into waters of the United States. Pursuant to 40 C.F.R. 122.28(c)(1), EPA Regional

Administrators are required to issue general permits covering discharges from offshore oil and gas exploration and production facilities within the Region's jurisdiction.

5. A person means an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body. See 33 U.S.C. § 1362(5).

6. Pollutant means, among other things, "solid waste," "chemical wastes," "biological materials," "radioactive materials," "sand," and "industrial waste." See 33 U.S.C. §1362(6).

7. A point source means any discernible, confined, and discrete conveyance, including but not limited to any pipe or other conduit, from which pollutants are or may be discharged. See 33 U.S.C. § 1362(14).

8. The term "discharge of a pollutant" and the term "discharge of pollutants" each means any addition of any pollutant to waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft. See 33 U.S.C. § 1362(12)(B).

9. Contiguous zone means the entire zone established or to be established by the United States under article 24 of the Convention of the Territorial Sea and the Contiguous Zone. See 33 U.S.C. § 1362(9).

10. Ocean means any portion of the high seas beyond the contiguous zone. See 33 U.S.C. § 1362(10).

11. On December 20, 2013, EPA, Region 9, issued NPDES General Permit No. CAG280000, *Authorization to Discharge under the National Pollutant Discharge Elimination System for Oil and Gas Exploration, Development, and Production Facilities*, herein after, "General Permit" which became effective on March 1, 2014. The General Permit applies to existing development and production platforms, and new exploratory drilling operations in the Offshore Subcategory of the Oil and Gas Extraction Point Source Category under 40 C.F.R. Part 435, subpart A, discharging to specified lease blocks which are located in Federal waters off the Southern California coast, seaward of the outer boundary of the territorial seas.

12. Development and production, and exploration facilities located on the platforms covered in Part I.A.3 the General Permit are required to submit a written notification of intent to be covered under the General Permit no later than 30 days after the effective date of the Permit. See General Permit Part I.A.6.a.

III. FINDINGS OF FACT AND DETERMINATIONS OF LAW

13. Respondent is a limited liability company formed under the laws of Delaware and is a "person" within the meaning of CWA § 502(5), 33 U.S.C. § 1362(5).

14. At all times relevant to this action, Respondent owned and/or operated a wellbore production platform, referred to as platform Ellen, and a production handling and processing platform, referred to as platform Elly. Platforms Ellen and Elly are located approximately 11 miles off the coast of Long Beach, California in the Pacific Outer Continental Shelf in the Pacific Ocean, hereinafter "Facility."

15. Respondent has been engaged in the production of crude oil at the Facility. Respondent's operations at the Facility fall within activities classified under SIC Code 1311 – Crude Petroleum and Natural Gas and is subject to the regulatory requirements of the Offshore Subcategory of the Oil and Gas Extraction Point Source Category under 40 C.F.R. Part 435, subpart A.

16. The Facility discharges at least four types of wastewater:

a. Produced Water (Discharge 002);

b. Domestic and Sanitary Wastes (Discharge 005);

c. Fire Control System Water (Discharge 008); and

d. Noncontact Cooling Water (Discharge 009).

17. Platform Elly treats produced water (Discharge 002 under the General Permit) through a three-step process. Produced water flows through a free-water knockout, heater treater, and floatation cell (WEMCO model 120) which progressively enhances oil/water separation. From the WEMCO, the produced water flows to the Filtered Produced Water Surge Tank, tank S-03. Produced water is then pumped to injection wells, but when injection pumps fail and tank S-03 exceeds capacity, produced water flows to the Pacific Ocean through an open-bottomed vessel called the "Emergency Sump." Such a conveyance is a "point source" within the meaning of CWA § 502(14), 33 U.S.C. § 1362(14).

18. Sanitary waste and most of the domestic waste (Discharge 005) is routed to the Marine Sanitation Device on Platform Ellen for treatment and discharge. Other domestic waste, namely wastewater from laundry, is commingled with produced water.

19. When the Platform Elly's fire control system is active, the platform discharges fire control system water (Discharge 008). Fire control system water originates as seawater pumped through the main seawater intake and is routed through the fire control system. If this water is discharged on deck during testing, then it is comingled with deck drainage.

20. Noncontact cooling water discharges from both platforms Elly and Ellen (Discharge 009). This water originates as seawater pumped through the main seawater intake and is pumped through various pipes to cool equipment. Operators at the Facility add between 0.2 – 0.5 ppm of chlorine to the seawater pumps as a biofilm inhibitor.

21. Wastewater discharges from the Facility include produced water (which contains oil and grease, zinc), domestic waste, sanitary waste, fire control system water, and noncontact cooling water, and therefore contain "pollutants," as defined by CWA § 502(6), 33 U.S.C. § 1362(6).

22. All wastewater discharges from the Facility enter directly into the Pacific Ocean, beyond the territorial seas and within the contiguous zone within the meaning of CWA § 502(9) and (10), 33 U.S.C. § 1362(9) and (10).

23. Respondent's discharge of wastewater into the Pacific Ocean constitutes a "discharge of pollutants" within the meaning of CWA § 502(12)(B), 33 U.S.C. § 1362(12)(B).

24. On March 31, 2014, Respondent submitted a Notice of Intent for Platforms Ellen and Elly to each be independently covered by the General Permit and received coverage for Platform Ellen (CAF001147) and Platform Elly (CAF001148).

25. The General Permit requires:

a. Part III.A of the General Permit requires that monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit. 40 C.F.R. § 122.41(j)(4). EPA Method 1664, (Oil and Grease) states "A 1-L sample is acidified to pH<2 and serially extracted three times with n-hexane in a separatory funnel." See 40 C.F.R. § 136.3, Table IB. Samples taken to be analyzed for oil and grease must be cooled to ≤6°C. See 40 C.F.R. §136.3, Table II. Furthermore, EPA Method 200.8 requires that zinc analysis be performed with a separate sample container using nitric acid (HNO_3) as a preservative.

b. Part III.B of the General Permit requires that samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. 40 C.F.R. § 122.41(j)(1).

c. Part II.B.5.a of the General Permit establishes discharge limitations for produced water where effluent must not exceed a monthly average of 29 mg/l for oil and grease and a daily maximum of 42 mg/l for oil and grease. 40 C.F.R. § 435.13.

d. Part II.B.5.b of the General Permit states that the term *maximum for any one day* as applied to BPT, BCT and BAT effluent limitations for oil and grease in produced water shall mean the maximum concentration allowed as measured by the average of four grab samples collected over a 24-hour period that are analyzed separately. Alternatively, one grab sample may be taken instead of four samples. If only one grab sample is taken for any one week, it must meet the maximum for any one day limit. If four samples are taken for oil and grease over a 24-hour period, the maximum value for reporting purposes under Part III.A.2.a.i. of the permit is the average of the four samples rather than the maximum of the four samples.

e. Part III.D. of the General Permit requires that if the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 C.F.R. Part 136 or as specified in this permit, the permittee shall include the results of this monitoring in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR.) 40 C.F.R. § 122.41(l)(4)(ii).

26. On March 8-9, 2017, representatives of the EPA performed an inspection of the Facility to evaluate the Respondent's compliance with the requirements of the General Permit. The EPA's inspection report was sent to Respondent on May 23, 2017 and is attached hereto as Attachment 1.

27. As described in more detail in Attachment 1, the EPA inspectors observed the following:

a. One glass amber bottle was used to analyze concentrations of both oil and grease and zinc, two parameters that have different sample collection requirements under 40 C.F.R. §136.3;

b. Respondent is in the practice of collecting four samples during discharge events, but not analyzing all four samples. This practice is outlined in Respondent's sampling Standard Operating Procedures, which is included as "Appendix 8" in Attachment 1. Based on a review of Respondent's chain of custody forms and DMR submissions to EPA, Beta is in the practice of analyzing some of the samples only after the result of one bottle is obtained. For example, between July 2014 and March 2017, on five different dates, Respondent collected four samples of Discharge 002 and analyzed only one;

c. Beta Offshore reported exceedances of effluent limitations for Discharge 002, produced water, for oil and grease on four occasions: August 2016 daily maximum (15,300 mg/l), August 2016 monthly average (15,300 mg/l), July 2015 monthly average (34.2 mg/l), and July 2014 monthly average (30.3 mg/l);

d. Four samples were obtained in the August 9, 2016 sampling event for oil and grease. All four samples were analyzed, but Beta Offshore only reported the results of one sample, which happened to have the lowest concentration of oil and grease, rather than averaging as required by Permit Part III.D;

e. As indicated in the chain of custody form from the Discharge 002 sampling event, dated July 3, 2014, no containers in the shipment were labeled and the form did not include a relinquished signature; and

f. During the inspection, representatives from Beta Offshore told EPA inspectors that ice was not regularly used to preserve samples of oil and grease to ≤6°C, as required by 40 C.F.R. §136.3.

28. Each time Respondent failed to analyze all samples, failed to report all results, and failed to follow procedures in 40 C.F.R. Part 136 is a violation of its NPDES Permit.

29. By discharging wastewater and failing to comply with the General Permit, Respondent has violated and continues to violate CWA §§ 301(a) and 402, 33 U.S.C. §§ 1311(a) and 1342.

IV. ORDER FOR COMPLIANCE ON CONSENT

30. Based on the foregoing Findings of Fact and Determinations of Law and pursuant to the authority of Section 309(a) of the CWA, 33 U.S.C. § 1319(a), IT IS HEREBY ORDERED and AGREED TO:

a. Respondent shall collect and analyze samples of zinc in separate bottles from those it uses for oil and grease.

b. Respondent shall require training for all operators who are tasked to conduct sampling for compliance with the General Permit.

c. Within (30) thirty calendar days, Beta Offshore shall rewrite and implement its sampling protocol for Discharge 002 to reflect the requirements in the General Permit, which states in Part II.B.5.b: "effluent limitations for oil and grease in produced water shall mean the maximum concentration allowed as measured by the average of four grab samples collected over a 24-hour period that are analyzed separately. Alternatively, one grab sample may be taken

instead of four samples." Beta Offshore shall submit the new sampling protocol to EPA within (30) thirty days for review and approval.

d. Within (30) thirty calendar days, Beta Offshore shall amend and resubmit the August 2016 DMR to EPA through NetDMR. In amending the August 2016 DMR, Beta shall include for Discharge 002 all values that were analyzed following the proper EPA 1664 methodology and shall not include sample results determined from analysis that deviated from EPA 1664 methodology.

e. Beta Offshore shall make the necessary changes in operations at Platforms Elly and Ellen to immediately comply with all effluent limitations in the General Permit.

f. Beta Offshore shall label all sample bottles and have proper chain of custody documentation.

g. Beta Offshore shall preserve Discharge 002 samples in accordance with EPA Method 1664.

V. FINAL REPORT AND TERMINATION OF THE AOC

31. Within thirty (30) calendar days after Respondent has fully completed and implemented the actions required by Section IV (Agreement on Consent) of this AOC, Respondent shall submit for the EPA's review and approval a final report (Final Report) that includes a description and timeline of all of actions which have been taken toward achieving compliance with this AOC and the CWA.

32. If the EPA determines, after review of the Final Report, that all the requirements of this AOC have been completed and implemented in accordance with this AOC, the EPA will provide notice to Respondent and this AOC shall be deemed terminated.

33. If the EPA determines that any requirement has not been completed and implemented in accordance with this AOC, the EPA will notify Respondent, provide a list of deficiencies, and require Respondent to modify its actions as appropriate to correct such deficiencies within thirty (30) days of receiving EPA's notice of deficiencies. If so required, Respondent shall implement the modified requirement(s) and submit a modified Final Report.

VI. SUBMISSIONS AND RECORD RETENTION

34. Respondent shall submit all written communications, including progress reports, electronically. Respondent shall submit all required reports and plans to the EPA in an electronic format that allows them to be searchable by key word. Respondent shall send all submittals to the following e-mail addresses. Submissions will be deemed made on the date they are sent electronically to:

Colby Tucker
Inspector, Enforcement Division
Tucker.WilliamC@epa.gov

and

Desean Garnett
Attorney-Advisor, Office of Regional Counsel
Garnett.Desean@epa.gov

35. All reports, notifications, documentation, and submittals required by this AOC shall be signed by a duly authorized representative of Respondent as specified by 40 C.F.R. § 122.22 and shall include the following statement:

> "I certify under the penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

36. Respondent shall preserve and retain all records and documents now in its possession or control, or which come into its possession or control, that relate in any manner to the performance of the tasks in this AOC, until five (5) years after termination of this AOC. Respondent shall also instruct its agents to preserve all documents, records, and information of whatever kind, nature or description relating to the performance of the tasks in this AOC.

VII. MODIFICATION

37. Any request for modification by Respondent shall include the reason(s) for the request and a timeline for completion. Modification of this AOC shall be in writing and shall take effect only upon approval by the EPA. Failure by Respondent to implement any modified requirement(s) shall be a violation of this AOC.

VIII. GENERAL PROVISIONS

38. This AOC is binding on Respondent and its officials, officers, directors, partners, agents, employees, attorneys, successors and assigns, and on all persons, independent contractors, consultants and contractors acting in concert with Respondent.

39. Respondent shall provide a copy of this AOC to any successor in interest to its control, operation, or any other interest in any portion of its Facility at least thirty (30) calendar days prior to the transfer, and shall simultaneously notify the EPA in writing, via e-mail, that such notice has been given. Within fourteen (14) calendar days after the effective date of this AOC or the date of contracting, whichever is later, Respondent shall provide a copy of this AOC to all contractors and/or consultants to perform any of the work described in Section IV. Respondent shall condition the transfer of control, operation or any other interest in any portion of its Facility and any contract related to the performance of the work described in Section IV upon successful execution of this AOC.

40. This AOC is not and shall not be construed to be a permit under the CWA, nor shall it in any way relieve or affect Respondent's obligations under the CWA, or any other applicable federal or state laws, regulations, and/or permits. Compliance with this AOC shall be no defense to any actions commenced pursuant to such applicable laws, regulations, or permits, nor does it constitute a release.

41. This AOC shall in no way affect the rights of the EPA or the United States against any person not a party hereto.

42. This AOC shall in no way limit or affect the EPA's authority to obtain information, and to enter, inspect, sample or monitor compliance under any law, permit, court order or agreement.

43. The provisions of this AOC shall be severable. If any provision is declared by a court of competent jurisdiction to be unenforceable, then the remaining provisions shall remain in full force and effect.

44. Respondent consents to and agrees not to contest the EPA's authority or jurisdiction to issue and enforce this Section 309(a) AOC. Respondent waives any and all remedies, claims for relief and otherwise available rights to judicial or administrative review that Respondent may have with respect to any issue of fact or law set forth in this Order, including any right of judicial review under Chapter 7 of the Administrative Procedure Act, 5 U.S.C. §§ 701-706.

45. Failure to comply with the terms of this AOC may result in liability for statutory civil penalties under CWA Section 309(d), 33 U.S.C. § 1319(d), as modified by 40 C.F.R. Part 19. Upon suit by the EPA, a United States District Court may impose such penalties if the court determines that Respondent has violated the CWA as described above and failed to comply with the terms of this AOC. In determining the amount of any penalty, the court will consider the seriousness of the violations, the economic benefit (if any) resulting from the violations, any history that Respondent may have of such violations, any good faith efforts that Respondent has made to comply with legal requirements, the economic impact a penalty may have upon Respondent, and such other matters as justice may require.

46. Issuance of this AOC is not an election by the EPA to forego any remedies available to it under the law, including without limit any administrative, civil or criminal action to seek penalties, fines, or other appropriate relief under the CWA. The EPA reserves all available legal and equitable rights and remedies to enforce any violations cited in this AOC, and the right to seek recovery of any costs and attorney fees incurred by the EPA in any actions against Respondent for non-compliance with this AOC.

47. In accordance with CWA § 309(a)(4), 33 U.S.C. § 1319(a)(4), the EPA will provide notice and a copy of this AOC to the State of California upon execution.

48. The undersigned signatory for Respondent certifies that he or she is authorized to execute this AOC and legally bind the Respondent.

IX. EFFECTIVE DATE

49. This AOC shall become effective on the date it is signed by the EPA.

IT IS SO AGREED AND ORDERED:

FOR RESPONDENT

_____ _____

Bruce Berwager
Vice President of Operations

Date

FOR U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 9

_____ _____

Kathleen H. Johnson
Director, Enforcement Division

Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Ms. Diana Lang
HSE Manager
Beta Offshore, a division of
Memorial Production Partners LP
111 West Ocean Blvd., Suite 1240
Long Beach, CA 90802

RE: March 8-9, 2017 Clean Water Act Inspection

Dear Ms. Lang,

Please find enclosed the National Pollution Discharge Elimination System (NPDES) inspection report for the U.S. Environmental Protection Agency's (EPA) March 8-9, 2017 inspection of Platform Ellen and Platform Elly.

Based on the information gathered during our inspection, we have identified several compliance concerns, which are identified in Section IV of the enclosed report. To help us better understand your perspectives on these concerns, and any actions you may have taken since our inspection, please submit short responses to each of the numbered items in Section IV. For clarity, please match your responses to the numbered item in the inspection report. Send your response by mail or electronic mail within 30 days of receipt of this report to:

Beth Aubuchon
USEPA Region 9
Enforcement Division ENF 3-1
75 Hawthorne Street
San Francisco, CA 94105
Aubuchon.Elizabeth@epa.gov

You may also contact Beth Aubuchon with any questions regarding the inspection at Aubuchon.Elizabeth@epa.gov or (415) 972-3327.

Sincerely,

Ken Greenberg, Manager
Water Enforcement Section I

EPA United States Environmental Protection Agency

Region 9 Enforcement Division
75 Hawthorne Street
San Francisco, CA 94105

Inspection Date(s):	March 8 & 9, 2017	
Time:	**Entry:** 12:30pm (March 8)	**Exit:** 3:00pm (March 9)
Media:	Water	
Regulatory Program(s)	Clean Water Act NPDES	
Company Name:	Beta Offshore	
Facility or Site Name:	Platform Elly and Platform Ellen	
Facility/Site Physical Location:	Outer Continental Shelf, Long Beach, CA	
Geographic Coordinates:	33.583537, -118.128567	
Mailing address:	111 W. Ocean Blvd. Suite 1240 Long Beach, CA 90802	
Facility/Site Contact:	Diana Lang	**Title**: HSE Manager
	Phone: 562-628-1529	**Email**: dlang@memorialpp.com
Facility/Site Identifier:	NPDES Permit CAG280000 / CAF001147 & CAF001148	
NAICS:	211111	
SIC:	1311	

Facility/Site Personnel Participating in Inspection:

Name	Affiliation	Title	Email
Diana Lang	Beta Offshore	HSE Manager	dlang@memorialpp.com
Christian Zumaran	Beta Offshore	Facilities Engineer	czumaran@memorialpp.com
Jamie Cool	Beta Offshore	Production Manager	jcool@memorialpp.com

EPA Inspector(s):

W. Colby Tucker	EPA R9	Inspector	Tucker.WilliamC@epa.gov
Elizabeth Aubuchon	EPA R9	Inspector	Aubuchon.Elizabeth@epa.gov

Federal/State/Tribal/Local Representatives:

N/A			
N/A			

Inspection Report Author:	W. Colby Tucker	415-972-3556
		Date: 5/15/2017
Supervisor Review:		
	Ken Greenberg	415-972-3577
		Date: 5/22/17

SECTION I – INTRODUCTION

I.1 Purpose of the Inspection

The purpose of the inspection was to ensure that Beta Offshore (Beta or Discharger) is in compliance with the requirements of the Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) permit CAG280000 for facility numbers CAF001147 (Platform Ellen), and CAF001148 (Platform Elly) (collectively, "Platforms"). During the inspection, we evaluated the accuracy and reliability of the Discharger's self-monitoring and reporting program and the Facility onsite generated waste streams, treatment processes and discharges to the Pacific Ocean, a water of the United States. The announced inspection consisted of two parts: a records review (conducted onshore on March 8, 2017 and continued March 9, 2017) and a general facility site visit (conducted offshore on March 9, 2017). The primary representative for the Discharger is Diana Lang, HSE Manager of Beta Offshore.

SECTION II – FACILITY / SITE DESCRIPTION

II.1 Facility Description

Platforms Elly and Ellen are two of the three "Beta Unit" offshore platforms built for Royal Dutch Shell Oil in the 1980s. Beta Offshore, an affiliate of Memorial Production Partners LP, manages and operates all three platforms of the Beta Unit: Platform Elly, Ellen, and Eureka. These facilities are located off the coast of Long Beach, California about 11 miles from shore. Platform Elly and Platform Ellen are located on the Outer Continental Shelf (OCS) and stand in about 250 feet of water. Platform Ellen is a wellbore platform equipped with permanent drilling equipment, including a drilling rig, a well bay with about 25 producing wells, and associated equipment. Platform Elly handles production and processing from wells located on both Ellen and Eureka. Platforms Elly and Ellen are connected by a bridge walkway and various pipes including production pipes, injection well pipes, and piping conductors carrying electrical cables. The wells on Ellen produce crude oil, water, natural gas, and associated by-products, namely hydrogen sulfide.

Platform Elly is connected to shore by a pipeline delivering crude oil for sale and by an electrical power feed. Elly then distributes power to Ellen and Eureka. Elly is also able to produce its own power through turbines powered by natural gas collected from the oil extraction process.

The Platforms are independently covered under the Master General Permit CAG280000 with individual facility numbers (see above). Given the connectivity and proximity of the two platforms, this report describes and evaluates wastewater discharges on both platforms as they relate to the CAG280000 permit.

II.2 Wastewater Sources

At the time of the inspection and within the past three years, the Platforms discharged at least four types of wastewater:

- Produced Water (Discharge 002) (Platform Elly)

- Domestic and Sanitary Wastes (Discharge 005) (Platform Ellen)
- Fire Control System Water (Discharge 008) (Platform Elly)
- Noncontact Cooling Water (Discharge 009) (Platforms Elly and Ellen)

Note: The number that follows the type of wastewater above refers to the numbering scheme for the different discharges outlined in the Permit.

Produced water is a by-product of crude oil and natural gas extraction on Platform Ellen. Produced water flows up through the producing well heads and on to Platform Elly for treatment and discharge. Typically, treated produced water returns to Platform Ellen for reinjection into the geological formation. Platform Elly has monitoring requirements for produced water for oil and grease, zinc, and toxicity. Platform Elly has effluent limits for oil and grease for produced water. Part II.B of the Permit discusses effluent limits and monitoring requirements associated with produced water discharges.

Depending on the activity on the Platforms, there are about 30 resident employees on Platform Ellen who contribute to Domestic and Sanitary Wastes. The number of people on board typically increases during daylight hours as non-resident employees, contractors, regulators, and other visitors travel to the Platforms. On March 8, 2017, there were 28 residents and 26 non-residents on the Platforms. Most domestic waste, sink, shower, and toilet water, is commingled with the sanitary waste stream and routed to a Marine Sanitation Device (MSD) for treatment and discharge. Other domestic waste, namely wastewater from laundry, is commingled with produced water. Part II.E of the Permit discusses effluent limits and monitoring requirements associated with Domestic and Sanitary Wastes.

Fire Control System Water originates as seawater pumped through the main seawater intake and routed through the fire control system. If this water is discharged on deck during testing, then it is comingled with deck drainage. During testing at Platform Elly, fire water sometimes discharges directly to the Pacific Ocean. Part II.F of the Permit discusses effluent limits and monitoring requirements associated with Fire Control System Water.

Noncontact Cooling Water discharges from both Platform Ellen and Platform Elly. This water originates as seawater pumped through the main seawater intake and is pumped through various pipes to cool equipment. Operators add between 0.2 – 0.5ppm of chlorine to the seawater pumps as a biofilm inhibitor. Both Platform Elly and Platform Ellen have specific chlorine effluent limits regarding noncontact cooling water. Part II.F and Appendix C, Table C-1 of the Permit discusses effluent limits and monitoring requirements associated with noncontact cooling water.

The following are notable permitted discharges that do not appear to have been discharged in the past three years:

- Drilling Muds and Cuttings (Discharge 001) (Platform Ellen)
- Well Treatment Completion and Workover Fluids (Discharge 003) (Platform Elly)
- Deck Drains (Discharge 004) (Platform Ellen and Platform Elly)

Drilling Muds and Cuttings occur during well drilling. For each well drilled in the last three years, all drilling muds and cuttings appear to have been discharged in a waste facility onshore.

Beta produces Well Treatment Completion and Workover Fluids when Beta operators conduct well treatments and workovers. Those fluids that are not lost downhole are surfaced at Platform Ellen and can be routed to the produced water treatment train on Platform Elly or captured and sent onshore for disposal. Beta claims no discharge of these fluids.

Deck Drains on Platform Ellen and Platform Elly capture fluids and solids on the decks mobilized by precipitation, fire test water or another source. Deck drains are routed to sumps that in turn are pumped to a disposal well.

II.3 Wastewater Treatment

II.3.i Produced Water

Platform Elly treats produced water through a three-step process. First, produced water flows to a free-water knockout for oil-water separation. Then, water flows to a heater treater for further separation and treatment. Finally, produced water travels to a flotation cell (WEMCO model 120) for finishing treatment (see Appendix 3). The crude oil product is separated for delivery after the first and second steps.

From the WEMCO, the produced water flows to tank S-03, Filtered Produced Water Surge Tank. This tank flows to two possible destinations: injection wells or to the Pacific Ocean, but contained in an open-bottomed vessel called the "Emergency Sump" (see the engineering flow diagram Appendix 4 and the simplified schematic Appendix 5). Platform Elly has three booster pumps (P-21A, P-20A, and P-20B) that pump produced water to the injection wells. When injection pumps fail and tank S-03 exceeds capacity, treated produced water is routed to the Pacific Ocean/Emergency Sump. The Emergency Sump begins 16 feet above sea-level and extends 177 below sea level. Flow from tank S-03 enters the Emergency Sump at 120 feet below sea level.

The Emergency Sump has a pump that operates four times every 24 hours which is connected to tank S-06, Disposal Tank. The Disposal Tank pump then pumps down the Disposal Tank and discharges to the disposal well.

II.3.ii Sanitary Waste

The Marine Sanitary Device (MSD) is located on Platform Ellen and it treats sanitary waste from both Elly and Ellen. All sanitary waste from the Platforms flow to the MSD. Beta employs a Type II MSD manufactured by Omnipure. A mixture of waste and seawater enters a receiving tank and flows through a macerator pump to create a slurry. The slurry then flows through the book cells for oxidation and disinfection through electrochlorination. Residual chlorine is measured daily.

II.4 Compliance History

The following table is a list of Beta's self-reported effluent limit violations on Discharge Monitoring Reports (DMRs) submitted to EPA from January 2014 to January 2017.

DMR Date	Parameter / Discharge #	Reported Value	Permit Limit
August 2016	Oil and Grease / 002	15,300 mg/L	42 mg/L (daily max)
August 2016	Oil and Grease / 002	15,300 mg/L	29 mg/L (monthly avg.)
July 2015	Oil and Grease / 002	34.2 mg/L	29 mg/L (monthly avg.)
July 2014	Oil and Grease / 002	30.3 mg/L	29 mg/L (monthly avg.)

SECTION III – NARRATIVE & OBSERVATIONS

Drilling fluids and Cuttings (Discharge 001)

1. No drilling occurred while EPA inspectors Colby Tucker and Elizabeth Aubuchon (we) were on board.
2. According to Christian Zumaran, depending on the formation and technical issues, drilling a well can take around five weeks to complete.
3. Beta maintains documents related to drilling fluids and cuttings. We conducted a spot check of the documents relating to Discharge 001 between 2014 and 2017. All documents viewed showed no discharge of fluids and solids relating to Discharge 001.
4. We observed chemical inventories relating to drilling fluids.
5. According to Diana Lang, drilling fluids not lost downhole and cuttings are captured and sent on shore for disposal.

Produced Water (Discharge 002)

6. According to Jamie Cool and Mr. Zumaran, the Produced Water Surge Tank (S-03) receives treated produced water and make-up water. According to DMR cover letters, sources of domestic waste that do not flow to the disposal well also flow to S-03.
7. Beta maintains records of the effectiveness of the WEMCO by taking daily measurements of the concentration of oil entering the WEMCO and oil exiting the WEMCO. These measurements are conducted using a non-approved EPA method.
8. According to piping and instrumentation diagrams (P&ID), the capacity of tank S-03 is 600 barrels.
9. According to Mr. Cool and Mr. Zumaran, produced water and make-up water is responsible for most of the flow entering tank S-03.
10. Platform Elly has three injection pumps, and according to Mr. Cool, normal operations are when two pumps are operating and one is off, serving as a backup. The pumps can be run on either produced gas or diesel.
11. During normal operations, the produced water mixture in tank S-03 is pumped from Platform Elly to the injection wells on Platform Ellen.
12. P&IDs indicate there are two high level alarms in the Produced Water Surge Tank (S-03). One alarm serves as a warning, and the second alarm occurs when the tank is 95% full. According to the control room operator working during the time of the inspection, this second alarm means that discharge is imminent. He said that when this alarm goes off, he

instructs an operator via radio to begin the sampling protocol. Control room operators are responsible for watching for and communicating process alarms to field operators.

13. According to an operator who has sampled in the past, when he receives notice to sample from the control room, he goes to the laboratory to retrieve four glass amber bottles with H_2SO_4 preservative in the bottles. Then, he goes to the sampling point and fills all the bottles.
14. We observed glass amber bottles and plastic bottles (for metals) in the laboratory (see Appendix 1, Photo 6).
15. According to this operator, most discharge events occur between 15 and 20 minutes. He does not recall any event lasting more than one hour.
16. Beta's sampling protocol for Discharge 002 dated 2/11/2015 indicates that oil and grease samples should be placed in ice for preservation (see Appendix 6).
17. According to Ms. Lang, ice is not used after sample collection to avoid contamination of sample.
18. Beta's sample protocol for Discharge 002 dated 2/11/2015 states:

> "Preferably during the actual discharge, collect four 1-liter samples of produced water from the outlet of the last treatment vessel (the official NPDES sample point) following the procedure outlined herein…
>
> 1. Purge the sample point for 1 full minute and then reduce the stream to avoid splashing the preservative out of the sample jar. Slowly fill each bottle to the top and do not overfill." (see Appendix 6).

19. Chain of Custody forms are prefilled and have four samples spaces prefilled (see Appendix 7). Three of the prefilled samples have "***Hold***" written in the "Analyses Requested" column. In the GRAB/COMP. column, all prefilled rows have "grab" written.
20. Ms. Lang said that typically only one sample gets analyzed and the other three are discarded by the laboratory if no other analyses are requested by Beta. Ms. Lang said that she considers these samples to be duplicates.
21. We requested documents relating to sampling standard operating procedures (SOP) and Ms. Lang produced a sampling SOP dated December 2007 for Discharge 002 (see Appendix 8). It states, "On the c-o-c, request that only the first sample be analyzed and hold the other three until further notice: (per ESH Manager.). [emphasis not added] (If the first sample is less then [*sic*] the permit limit, the other three will not need to be analyzed. If it is over the limit, the compliance group will notify the lab to have all remaining samples analyzed to get an actual composite value.)"
22. We observed at least three differently dated versions of the sampling protocol, some located on the platform (laboratory and control room) and the on-shore office. These protocols are different in length and content.
23. According to Mr. Cool and Mr. Zumaran, the only technically feasible way for tank S-03 to exceed capacity and overflow is if one or more injection pumps fail.
24. The Discharge 002 sampling point is located after S-03 (see Appendix 1, Photos 3 & 4). The sampling point is located behind several pipes and requires bending and shifting to access.
25. Mr. Lang produced a document summarizing produced water discharges (Discharge 002). Of note, the document states that on 7/4/2015 there was a discharge with a concentration

of 30.7 mg/L oil and grease and on 7/23/2015 there was a discharge with a concentration of 30.7 mg/L oil and grease. (see Appendix 9). The relevant section of the July 2015 DMR submitted to EPA by Beta states that Beta's discharge at 002 had a monthly average of 34.2 mg/L oil and grease which is an exceedance of the NPDES permit effluent limit (see Appendix 10). The effluent limit for Discharge 002, monthly average, is 29 mg/L oil and grease.

26. The summary document of Produced Water (Discharge 002) indicates that on August 9, 2016, there was a discharge of 15,300 mg/L, which is the same value recorded on the DMR for the month of August 2016.

Events on August 9, 2016 relating to Discharge 002

27. We asked about the exceedance on August 9, 2016 and Ms. Lang produced a document titled "Beta Offshore (P-0300) Produced Water Discharge August 9, 2016 24-hour reporting of permit limit exceedance – NRC #1156753" (see Appendix 11). The document describes the events on August 9, 2016; injection pumps failed, then S-03 exceeded capacity, and produced water flowed to the Pacific Ocean/open-bottomed emergency sump.
28. The document states, "Lab results reviewed on 8-18-16 at 2:05 pm. Note: *Lab used 500 ml; on 8-19-16 Beta HSE Manager requested the 3 HOLD samples be tested for O&G. Results forthcoming."
29. Ms. Lang produced a chain of custody form for the samples of this event that suggests that the data of the "3 HOLD" samples were discarded; an arrow from the relevant rows points to a handwritten note on the chain of custody form that reads: "Lab data discarded: Not trustworthy" (see Appendix 12).
30. On the chain of custody form submitted by Beta to EPA as part of its August 2016 DMR there is no handwritten note: "Lab data discarded: Not trustworthy" (see Appendix 13).
31. Ms. Lang stated that the results from the three hold samples were "not believable" and were higher than the reported result. She did not say what the results were.
32. Ms. Lang stated that she has decided to use a different company to analyze future oil and grease samples because of the analyses relating to the event on August 9, 2016. The new contracted company is named Positive Lab Service and uses Method 1664B to determine oil and grease concentrations.
33. An email from Eurofins Calscience, the laboratory Beta contracted with to run the oil and grease and metals analysis, stated that Beta gave approval to deviate from the EPA approved methods when analyzing discharge samples from August 9, 2016 (see Appendix 14).
34. After the inspection, we acquired the analytical results of the discarded data (see Section III.29 above) from Eurofins Calscience which were analyzed using Method 1664A. The analysis showed that the concentrations of oil and grease in these bottles were: 64,200 mg/L, 64,300 mg/L, and 86,000 mg/L (Appendix 15).

Domestic and Sanitary Wastes (Discharge 005)

35. We observed the MSD and the Coast Guard certification of the MSD.
36. Signs on the MSD suggest maintenance should occur both daily and weekly.

37. An operator describing how the MSD works said that maintenance occurs daily and weekly.
38. Daily maintenance consists of backflushing the macerator pump.
39. Weekly maintenance consists of opening the book cell (see Photo 12) and scrubbing the electrode plates with a brush. An operator said this typically takes a couple of hours and starts around 12:00 am when the sanitary system use is low.
40. The residual chlorine is tested daily using CHEMets (see Photo 11). An operator demonstrated how he would fill the glass pipette and compare the color within the pipette to a standard in the box.
41. The residual chlorine discharge for March 7, 2017 was 3.5 mg/L.
42. There is an offline MSD unit adjacent to the MSD unit online.

Preventative Maintenance

43. Mr. Cool demonstrated the Avantis preventative maintenance (PM) system to EPA inspectors Colby Tucker and Elizabeth Aubuchon.
44. We observed that Avantis serves as a way to manage and schedule PM and to issue, document, and report work orders.
45. Mr. Cool said that Beta has changed PM systems three times in the last three years due to various management decisions.
46. Mr. Cool said that all assets with moving parts (i.e. pumps) were currently listed with PM schedules. Other assets (i.e. tanks) are listed in the Avantis system, but do not currently have any PM scheduled. The required certification schedule for tanks is maintained elsewhere.
47. Mr. Cool said that when injection pumps fail there would be a work order associated with the repair of the pump.
48. In an email after the inspection, Ms. Lang clarified Mr. Cool's statement (noted above, Section III.47) that pump failures do not trigger work orders and any indication of pump failures be noted on the Daily Morning Report (i.e. Appendix 16).

SECTION IV – AREAS OF CONCERN

The presentation of areas of concern does not constitute a formal compliance determination or violation by EPA.

1. Permit Part III.A states, "Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit."

   EPA Method 1664 ("Oil and Grease") states, "A 1-L sample is acidified to pH<2 and serially extracted three times with…" This statement indicates that the entire 1-L sample needs to be extracted and used for the oil and grease analysis to be consistent with method protocol.

   The chain of custody sheet from the August 9, 2016 sampling event (Appendix 12) indicates that one glass amber bottle, marked on the chain of custody sheet as sample 1, was used to analyze the concentrations of both oil and grease and zinc, two parameters

that have different sample collection requirements. EPA also received an email from Eurofins Calscience, Beta's contracted laboratory, which confirmed that Beta requested that the sample analysis for both oil and grease and zinc originate from the same bottle, which deviated from Method 1664 for the oil and grease analysis (Appendix 14). The entire one liter should have been devoted to analyzing oil and grease and a different vessel should have been used to collect a sample for zinc analysis.

2. Beta Sampling Procedure (Appendix 6, page 8), states that the sampling procedures for metals, including zinc, includes using a two-quart plastic bottle and preservation with HNO_3, and cooling to a temperature of 4°C. EPA approved sampling methodology listed in 40 CFR Part 136 for metals, including zinc, includes requirements to use nitric acid (HNO_3) for preservation.

   The chain of custody sheet from the August 9, 2016 sampling event (Appendix 12) indicates that for sample 1, one glass amber bottle with H_2SO_4 as a preservative was used to analyze both the concentrations of oil and grease and zinc. Beta's contracted laboratory, Eurofins Calscience, also submitted a Sample Anomaly Report with their analysis report to Beta Offshore, which states, "Metals container not received" (Appendix 17). The potential issues with this sampling analysis are:
   - The sample used for zinc analysis was preserved with H_2SO_4 instead of HNO_3, and
   - The sample used for zinc analysis was collected with a glass bottle instead of a plastic bottle.

   It is not clear why Beta elected to split one sample between two analyses (oil and grease and zinc) when three other samples were available and not initially used for analysis.

3. In its August 2016 DMR, Beta reported 15,300 mg/L of oil and grease for Discharge 002, the analytical result of sample 1, collected on August 9, 2016 and analyzed as described in Areas of Concern 1 and 2 above.

4. The Eurofins Calscience report indicates the concentration of zinc in the August 9, 2016 sample was 0.0610 mg/L (60.10 µg/L) (Appendix 18).

   Beta's August 2016 DMR reports that the zinc concentration was 8 µg/L (Appendix 19) for "Monitoring Period" of "01/01/2016 - 12/31/2016". There does not appear to be any reported monitoring of zinc with respect to Discharge 002 in any other month in 2016. It appears that Beta's August 2016 DMR should have indicated a zinc concentration of 60.10 µg/L for Discharge 002.

5. Permit Part III.D states, "If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the permittee shall include the results of this monitoring in the calculation and reporting of the data submitted in the DMR."

   During the records review, Ms. Lang stated to us that a total of four samples were obtained on August 9, 2016 and were analyzed using Method 1664 for oil and grease

analysis. Laboratory reports (Appendices 15 and 18) confirm that all four samples were analyzed for oil and grease. The results were 15,300 mg/L for sample 1, 64,200 mg/L for sample 2, 62,300 mg/L for sample 3, and 86,000 mg/L for sample 4. Based on review of the chain of custody sheet and Eurofins Calscience laboratory report, it appears that Eurofins followed proper procedures for the oil and grease analysis for samples 2, 3, and 4. Beta did not report the results of samples 2, 3, and 4 in the August 2016 DMR sent to EPA and instead reported only the result from sample 1. The analytical data suggests that the DMR entries for oil and grease for August 2016 should have been 71,500 mg/L as the daily maximum and 71,500 mg/L as the monthly average, the average of samples 2, 3, and 4, which were analyzed properly.

6. Permit Part III.A states, "Monitoring must be conducted according to test procedures approved under 40 CFR Part 136." 40 CFR 136 Table II states that samples taken to be analyzed for oil and grease must be cooled to ≤6°C. Best practices for sample collection include labeling sample containers.

   Ms. Lang stated that ice was not regularly used to preserve samples, however, many chain of custody forms indicated a satisfactory arrival temperature below 6°C, as required by Method 1664.

   Beta sampled Discharge 002 on July 3, 2014 and sent samples to Eurofins Calscience, the laboratory contracted to complete the analysis. The chain of custody form from this sampling event does not include a relinquished signature and is unclear in its notation what samples were included in the shipment to the laboratory. Eurofins Calscience produced a "Sample Anomaly Report" indicating that no containers in the shipment were labeled (Appendix 21).

7. Beta has produced documents with conflicting messages regarding the representativeness of the sampling location for Discharge 002. A sampling SOP dated December 2007 for Discharge 002 states, "Confirm with Operations that all conditions are safe and the NPDES sample point is in service…All samples are to be collected downstream of the last treatment vessel and prior to ocean discharge. If there is another source of water (i.e. cooling water) mixed with the produced water, the produced water sample must be sampled prior to the commingling of the fluids" (Appendix 8). Here Beta appears to recognize that the NPDES compliance point is on the platform, accessible for sampling, and before commingling of any fluids, including seawater. In a letter to EPA dated on August 23, 2016, Beta writes, "The sample point where the oil and grease samples were collected was downstream of the produced water tank S-03 and prior to an emergency sump U-06. The emergency sump is located on the lower deck and extends to the ocean. It is a vertical pipe type structure used to capture any free oil twice per day. The sump extends -177 ft. and it was not possible to sample the water discharged at the bottom of the sump's outlet. Instead, the sample was collected upstream of the sump (which is technically the last treatment vessel) and may not necessarily be representative of the water that was actually discharged from the sump outlet" (Appendix 22). Here Beta suggests that the appropriate place to sample discharge for compliance is at the sump outlet.

We believe that the previously established compliance point (see Photos 3 and 4) is indeed the appropriate compliance point for the Platforms. Any attempt to sample discharge at the bottom of the emergency sump would be sampling the discharge after comingling and dilution with seawater.

8. Permit Part III.B states, "Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity." And Permit Part II.B.5.b states, "The term maximum for any one day as applied to BPT, BCT and BAT effluent limitations for oil and grease in produced water shall mean the maximum concentration allowed as measured by the average of four grab samples collected over a 24-hour period that are analyzed separately. Alternatively, one grab sample may be taken instead of four samples. If only one grab sample is taken for any one week, it must meet the maximum for any one-day limit. If four samples are taken for oil and grease over a 24-hour period, the maximum value for reporting purposes under Part III.A.2.a.i. of the permit is the average of the four samples rather than the maximum of the four samples."

   Beta's sampling protocol for produced water (Discharge 002) may not be representative of the discharge. Section III.18-21 of this report outlines Beta's sampling protocol and chain of custody practices.

   The permit states, "If four samples are taken for oil and grease over a 24-hour period, the maximum value is the average of four samples." This indicates that when Beta takes four samples Beta may be obligated to analyze and report the four samples taken. Beta is in the practice of collecting four samples during each sampling event, but not analyzing each sample.

   It appears that Beta is in the practice of collecting samples with the intention of analyzing some of the samples only after the results of one container is obtained. This practice is outlined in Beta's sampling SOP updated on December 2007 (Appendix 8). A review of DMRs shows that in some cases Beta analyzed all samples collected and in other cases only analyzed one sample. While Beta's chain of custody forms indicate that sample 1 is the bottle that is analyzed first, there are instances where it is unclear which sample is considered to be sample 1. There is evidence that Beta does not always label their bottles (Appendix 21, page 16) and there is evidence that samples are reportedly filled at the same time (Appendix 12).

9. Based on a review of Beta chain of custody forms and Beta DMR submissions to EPA, we noted that between July 2014 and March 2017 on five different dates[1] Beta collected four samples of Discharge 002 and analyzed only one.

SECTION V – CONCLUSION

The National Pollution Discharge Elimination System (NPDES) relies on self-monitoring to ensure compliance with the rules and regulations of the Clean Water Act. We noted several areas

[1] The five dates are: 11/08/2014, 03/17/2015, 09/24/2016, 09/26/2016, and 03/15/2017.

of concern that call into question the reliability of Beta's monitoring protocols and reporting of discharge. Our March 8 and 9, 2017 inspection and subsequent record review concludes that it remains unclear whether Beta's apparent and stated produced water sampling methodology is consistent with permit and Clean Water Act regulation requirements.

SECTION VI – DOCUMENTS REQUESTED DURING INSPECTION AND ANALYTICAL RESULTS

Received:

1. Engineering Flow Diagram – Production Water Surge – NO. C6 – 1757
2. Engineering Flow Diagram – Emergency Drains and Sump – NO. 008-10-201
3. Produced Water Discharge Sampling and Monitoring Procedure (Updated 2/11/2015) (1 page)
4. OCS NPDES Monitoring Procedures for the Dec. 2004 General NPDES Permit CAG 2800000 (Updated 12/07) (8 pages)
5. Beta Offshore Spill History (Revised 5/4/2016) (4 pages)
6. Daily Morning Reports March 1 – March 9, 2017 (4 pages each)
7. Laboratory results for produced water discharges on:
    - 7/31/2014
    - 11/8/2014
    - 11/12/2014
    - 12/10/2014
    - 3/17/2015
    - 7/4/2015
    - 7/23/2015
    - 8/9/2016
    - 9/24/2016
    - 9/26/2016
8. Work Orders associated with water discharges on:
    - 7/23/2015
    - 8/9/2016
    - 9/24/2016

APPENDICES

Appendix 1 – Photograph Log

Appendix 2 – Sign in Sheet

Appendix 3 – Piping and Instrumentation Drawing of Produced Water Treatment Train

Appendix 4 – Piping and Instrumentation Drawings of Produced Water Surge Tank and Emergency Sump

Appendix 5 – Simplified Schematic of Produced Water Surge Tank and Emergency Sump

Appendix 6 – Sampling protocol for Discharge 002 dated 2/11/2015

Appendix 7 – Blank Chain of Custody form

Appendix 8 – Appendix C Sampling Information (Sampling SOP December 2007)

Appendix 9 – Summary of Discharge 002 sample dates and results

Appendix 10 – July 2015 DMR Discharge 002 Entry

Appendix 11 – 24-hour reporting of permit limit exceedance – NRC #1156753

Appendix 12 – Chain of Custody of samples from August 9, 2016 Discharge 002 (received during inspection)

Appendix 13 – Chain of Custody of samples from August 9, 2016 Discharge 002 (as submitted in August 2016 DMR)

Appendix 14 – Email from Eurofins Calscience to EPA on March 20, 2017

Appendix 15 – Eurofins Calscience Analytical Report 16-08-0626_s1

Appendix 16 – Daily Morning Report: August 9, 2016

Appendix 17 – Eurofins Calscience Sample Anomaly Report, August 9, 2016

Appendix 18 – Eurofins Calscience Analysis Report for Zinc, August 9, 2016

Appendix 19 – August 2016 DMR Entry for Zinc

Appendix 20 – August 2016 DMR Entry for Oil and Grease

Appendix 21 – Eurofins Calscience Analysis Report Dated July 30, 2014

Appendix 22 – Beta Exceedance Letter to EPA dated August 23, 2016